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DISTRICT OF COLUMBIA DIPTERA : RHAGIONIDAE.

By J. R. Malloch, C. T. Greene, and W. L. McAtee.

The Rhagionidae, long called Leptidae, have recently been revised by Leonard (see bibliography) and the present list follows in general the classification of that author. We exclude the genus *Xylomyia* Rondani, however, referring it to the Stratiomyiidae because of the fusion of the prosternum and pronotum. The prosternal plate in the Rhagionidae is clearly separated from the pronotum on each side by a membranous strip. The possession of a tubercle on the anterior or under surface of the hind coxa is a rather uniform feature of the family Rhagionidae though there is considerable variation in the degree of development, and in the position, of it. There is no tubercle at all in *Coenomyia* nor in the genus *Xylophagus* except in *X. nitidus* Adams, and it is very weak in *Dialysis*.

Systematic notes in this paper are by Malloch, and life history notes by Greene. The latter and McAtee wrote up the family in 1920 but decided to postpone publication until the appearance of Leonard's revision which was unexpectedly long delayed.

Insects of this family have sometimes been called snipe flies, a name no doubt suggested by that of the genotype of *Rhagio*, namely, *Musca scolopacea* L. which in turn seems to refer to the speckled coloration of the insect. Most members of the family have maculate wings and these are particularly noticeable in the genus *Rhagio* as the insects flush from their favorite head-down perches on the bark of trees to which they promptly return. The species of *Rachicerus*, *Dialysis*, and *Chrysopilus* usually are seen perched on foliage in sunny spots, those of *Xylophagus* may be found running over the fallen logs in which they passed their immature stages, while *Symphoromyia* draw attention to themselves by their efforts to bite, which as a rule, however, are not very determined. So far as known the larvae are predacious, and they live in the earth, under bark, in frass, or in decaying logs; a few are aquatic.

We present a table showing the number of species of the family collected in New Jersey (1910 List), New York (1928), and in the vicinity of the District of Columbia (excluding in each case synonyms and the genus *Xylomyia*).

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Genus	*N. J.*	*N. Y.*	*D. C.*
Coenomyia	—	1	1
Rachicerus	—	—	3
Arthropeas	—	1	—
Glutops	—	1	—
Arthroceras	—	1	—
Xylophagus	3	3	4
Dialysis	2	1	2
Bolbomyia	—	1	1
Symphoromyia	1	2	2
Atherix	—	1	1
Rhagio	4	7	4
Chrysopilus	6	8	7
Total	16	27	25

Of the local species 19 have been taken on Plummers Island, Md., and all of the others in nearby sections of the Potomac River Valley, facts indicated in the list by the abbreviations, P. I., and V. P. I., when not conveyed by locality records cited in full.

Genus COENOMYIA Latreille.

C. ferruginea Fabricius.—Cabin John, Md., R. M. Fouts; near Jackson's Id., Md., May 30; Plummers Id., Md., June 1, 1902, H. S. Barber; Virginia opposite Plummers Id., May 23, 1914, R. C. Shannon; Glencarlyn, Va., May 30, N. Banks; Rock Creek, D. C., June 9, 1917, C. H. T. Townsend.

Genus RACHICERUS Haliday.

R. fulvicollis Haliday.—Glen Echo, Md., July 16, 1922, Malloch; Maryland, near Plummers Id., July 26, 1916, H. S. Barber; Falls Church, Va., July 13 to 23; Glencarlyn, Va., July 7 to 23, N. Banks; July 8, 1915, Greene; Glencarlyn to Barcroft, Va., July 18, 1915, McAtee.

R. nitidus Johnson.—Plummers Id., Md., July 11, 1915, R. C. Shannon; Great Falls, Va., June 25, N. Banks; June 25 to 29, 1915, June 28, 1917, Greene; Virginia opposite Plummers Id., June 27, 1915, R. C. Shannon. Larvae were collected from a rotten log at Rosslyn, Va., April 25, 1913, by R. C. Shannon, and from a decaying fallen trunk of sycamore at Great Falls, Va., April 12, 1924, by Greene; these pupated May 11 and adults emerged May 25.

R. obscuripennis Loew.—The most numerous of this rather uncommon group; has been taken in Piedmont localities from June 14 to July 18; P. I.

Genus XYLOPHAGUS Meigen.

This genus has been divided by Enderlein but Leonard did not include the divisions in his revision. The species with the first antennal segment twice as long as thick, and a transverse

impression of the frons, Enderlein retained in *Xylophagus*, and those with the first antennal segment three times as long as thick and no transverse impression on frons he removed to *Archimyia* Enderlein, with *atra* Meigen as genotype, ranking the segregates as genera. Herein these are treated as subgenera, a new subgenus is described for the reception of *nitidus* Adams, and a revised key to the species is presented. In view of the confusion that obviously has existed in the identification of species of this genus we list records here only of specimens available during preparation of the present paper.

Key to the Species.

1. Hind coxa with a short blunt process on inner side near middle; entire frons gray-dusted and evenly convex in profile at same level as eyes; mesonotum glossy black in front, paler behind, without gray dust, humeri pale yellow; antennae about as long as head, the basal segment not over twice as long as thick nor as long as width of frons at its anterior extremity, the frons in female over twice as long from anterior extremity to anterior ocellus as its width at anterior extremity (*Anaxylophagus* Malloch, new subgenus)..... *nitidus* Adams

   Hind coxa without a process on inner side near middle; frons glossy on at least a portion of its surface except in *gracilis*..... 2.

2. Basal segment of antenna not three times as long as second and falling distinctly short of extending to anterior ocellus; scutellum with quite conspicuous pale erect hairs, most evident in the males (Subgenus *Xylophagus*)..... 3.

   Basal segment of antenna not less than three times as long as second and extending at least as far as anterior ocellus; scutellum with a few decumbent dark hairs, appearing bare except under a high magnification (Subgenus *Archimyia*)..... 7.

3. Frons entirely gray-dusted, less densely so in center near anterior extremity, and in male over twice as long as wide in front of anterior ocellus; metapleura dusted except in front; humeri yellow..... *gracilis* Williston

   Frons gray-dusted above, polished black either in center or anteriorly; humeri not yellow..... 4.

4. Sternopleura and metapleura entirely glossy black, the latter microscopically alutaceous on a large part of their surfaces; abdomen in both sexes black; antennae inserted on a very slight elevation (best seen in profile)..... 5.

   Hind margin of sternopleura and all of metapleura lightly gray-dusted; abdomen of female with at least the second and third tergites largely orange-red, that of male rarely showing traces of red color on second and third tergites, antennae inserted on a well developed elevation when seen in profile..... 6.

5. Upper half of frons densely gray-dusted; posterior portion of meta-

pleurum with a group of closely placed microscopic hairs near upper margin below base of halteres ..... *lugens* Loew

Frons in front of ocelli glossy black except for the usual narrow line of gray dust along each side; metapleura bare ..... *lugens* Loew, var.

6. Back of head entirely glossy black, without a trace of gray dust ..... *abdominalis* Loew, var.

Back of head entirely but lightly gray-dusted ..... *abdominalis* Loew

7. Frons entirely glossy black from anterior ocellus to anterior margin; legs fulvous yellow, extreme bases of hind coxae on posterior side black, hind tibiae dark brown on entire dorsal surface, apical two segments of fore and mid pair dark brown, hind pair more extensively so, but basal segment generally entirely pale; metapleura without trace of hairs ..... *decorus* Williston

Frons with a very distinct band of gray or brownish dust in front of anterior ocellus, glossy black in front of that portion except very narrowly on lateral margins ..... 8.

8. Legs black, or brownish-black, the knees narrowly yellowish; posterior portion of metapleurum with a group of microscopic fine hairs; basal segment of antenna extending to beyond anterior ocellus ..... *longicornis* Loew ♀

Legs much more extensively pale, sometimes almost entirely fulvous yellow ..... 9.

9. Basal segment of antenna not extending beyond anterior margin of anterior ocellus; several stiff hairs on upper posterior portion of the metapleurum; hind tibiae entirely pale or very slightly browned at apices, and only the apical 2 segments of all tarsi dark brown ..... *politus* Malloch, new species.

Basal segment of antenna extending well beyond anterior margin of anterior ocellus; no stiff hairs on upper posterior portion of the metapleurum; hind tibia distinctly infuscated on apical third or more, and the hind tarsi darkened from before apex of basal segment to tip ..... 10.

10. Hind coxae distinctly black at bases and the abdomen but slightly shining and finely alutaceous on apical half or more of dorsum ..... *longicornis* Loew ♂

Hind coxae not, or very slightly, darkened at bases and the abdomen glossy in both sexes ..... *rufipes* Loew.

Subgenus ANAXYLOPHAGUS Malloch, new subgenus.

It is remarkable that in this subgenus there is a small rounded tubercle on the anterior side of the hind coxa similar to that found in all species of the genus *Xylomyia* Rondani, but which is lacking in both of the other subgenera dealt with below. Most genera of Rhagionidae have a more or less evident elevation on the same surface of the hind coxa but not as pronounced as in the group described.

Subgenotype *Xylophagus nitidus* Adams; this species is known only from the White Mountains, New Hampshire.

Subgenus XYLOPHAGUS Meigen.

X. abdominalis Loew.—Leonard has used the name *fasciatus* Walker for this species but that term is preoccupied by Say's identical name; both of these were originally combined with the genus named *Xylophagus;* Loew's name appears to be next in priority. We have seen only one local specimen, that from Great Falls, Va., April 20, 1913, R. C. Shannon.

X. lugens Loew.—Plummers Id., Md., April 12, 1915; Dead Run, Va., April 15, 18, 1916, April, 1923, R. C. Shannon.

Subgenus ARCHIMYIA Enderlein.

X. longicornis Loew.—Plummers Id., Md., May 8, 1915, May 7, 1916, May 4, 1919; Great Falls, Va., April 28, 1915; Dead Run, Va., May 8, 23, 1915, May 19, 1916, R. C. Shannon. Leonard states that the male is unknown, but a pair taken in copula (Plummers Id., May 7, 1916, of the preceding records) bears his determination label, the female correctly named, and the male incorrectly as *rufipes* Lw.

Xylophagus politus Malloch new species.—The characters used in the key will suffice for the recognition of this species, which is very similar to large examples of *rufipes* Loew, with the hind coxae very slightly darkened at bases and the hind tibiae entirely pale. Length, 15–18 mm.

Type and two paratypes Burke, Colo., May 12–14, 1904; and one paratype Kokanee Mt., B. C., August 10, 1903 (R. P. Currie). The first three specimens are in the collection of Owen Bryant, the last in that of the U. S. National Museum; it was labelled *decorus* Will, by Leonard.

X. rufipes Loew.—This species is called *reflectens* Walker by Leonard but it would appear better to use Loew's name in the absence of definite information as to the identity of Walker's type specimen which was not seen by Leonard. It may be noted as probable also that many of Leonard's records of males belong under *longicornis* and not in *rufipes*. Local records include: Plummers Id., Md., May 2, 1902, H. S. Barber; Great Falls, Va., April 28, 1915; Dead Run, Va., May 11, 1915; Rosslyn, Va., April 22, 1913, R. C. Shannon.

Genus DIALYSIS Walker

D. fasciventris Loew.—Plummers Id., June 19, 1913, R. C. Shannon; Dead Run, Va., June 23, N. Banks; June 30, 1916, R. C. Shannon. This species is readily distinguished by the presence of hairs on the central portion of the metanotum, a character it shares with the western *disparilis* Bergroth.

D. rufithorax Say.—Common and generally distributed; season of collection of adults, May 21 to July 12; P. I. Small examples have been named *D. elongata* Say, but we have not seen any specimens of that species from the District of Columbia region. It may be recognized by having but two veins emanating from the discal cell, the humeri much paler below and very noticeably white pollinose, the tergites each with a large fuscous triangular mark, and the fore tibiae entirely pale.

Genus BOLBOMYIA Loew.

B. nana Loew.—Originally described from the District of Columbia; Forest Glen, Md., April 28, 1914, Otto Heidemann; Virginia opposite Plummers Id., April 28, 1907, McAtee (this specimen the type of *Misgomyia obscura* Coquillett).

Genus SYMPHOROMYIA Frauenfeld.

S. cinerea Johnson.—This biting species has been taken in a number of localities, but paucity of information about it makes it worth while to cite all of them: Washington, D. C., May 5, 1895; Plummers Id., Md., June 2, 1916, McAtee; May 28, June 3, 1914, R. C. Shannon; Virginia near Plummers Id., June 2, 1916, McAtee; May 18 to 31, 1915, June 1 to 9, 1916, R. C. Shannon; Falls Church, Va., May 16, 1917, Greene.

S. hirta Johnson.—Glen Echo, Md., June 17, 1923, Malloch.

Genus ATHERIX Meigen.

A. variegata Walker.—Riverdale, Md., June, 1916, F. R. Cole; Plummers Id., Md., April, 1908, reared from pupa found in sand, E. A. Schwarz; June 3, 1914, R. C. Shannon; Glencarlyn, Va., May 9, N. Banks; Chain Bridge, Va., April 23, 1922, Malloch. Larvae were collected in Paint Branch, Md., near Beltsville, July 2, 1922, H. S. Barber.

Genus RHAGIO Fabricius.

R. mystaceus Macquart.—Common and generally distributed; dates of collection of adults range from April 20 to May 27; in copula May 9; P. I. Has been bred from pupae found in frass at base of oak tree, Falls Church, Va., April 19, 1919; also from larvae found in a rotten log of sycamore at Great Falls, Va., April 12, 1924, Greene.

R. plumbeus Say.—Beltsville, Md., June 14, 1914; Plummers Id., Md., May 30, 1909, McAtee.

R. punctipennis Say.—Common and widespread; season, May 11 to June 23; P. I.

R. vertebratus Say.—Common in the Piedmont; usual dates of

collection of adults extend from May 19 to June 23, but single specimens available are labeled July 7 and Aug. 31; P. I.

Genus CHRYSOPILUS Macquart.

C. basilaris Say.—Fairly numerous—mostly in Piedmont localities; season June 20 to July 24; V. P. I.

C. fasciatus Say.—Common in the Piedmont; dates of collection range from June 2 to July 23; P. I.

C. modestus Loew.—Numerous in the Piedmont; collection dates run from June 16 to July 25, but single specimens are available dated May 16 and August 22; P. I.

C. ornatus Say.—Common and generally distributed; ordinary season from May 30 to July 14, one specimen labelled May 6; P. I.

C. quadratus Say.—Locally this is the most common species of the genus; it is widespread but not so often seen in the Coastal Plain as is *C. ornatus*; its active season is longer than that of the others extending from May 23 to July 25, with single dates of collection also as late as Aug. 9, 28, and Sept. 8; comes to light; P. I. Has been reared from larvae taken in wet frass from a hole in a tree near Dead Run, Va., Greene.

C. rotundipennis Loew.—Fairly numerous; dates of collection range from June 20 to July 30; V. P. I.

C. thoracicus Fabricius.—Very common; known season May 21 to June 20; in copula, May 28, June 4; P. I.

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Osten Sacken, C. R.
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ADDITIONAL NOTES ON TYPES WITH DESCRIPTION OF A NEW GENUS (HYMENOPTERA : CYNIPIDAE).

By Lewis H. Weld, *East Falls Church, Virginia.*

At the Zoological Museum in Lund, Sweden, are preserved the Dahlbom and C. G. Thomson collections of Cynipidae. TheThomson collection occupies two museum drawers and contains about 160 species of which about half are his own species. Nine are types of genera. There are two Dahlbom collections: his "museum" collection in two drawers; and his "private" collection in three small red drawers in a separate cabinet. Seven of his species are genotypes.

At the Zoological Museum in Berlin the Reinhard collection is distributed in the regular systematic collection as is also material from Mayr, Schlechtendal, Bassett, Kieffer and some of the Förster species. The von Halfern arrangement of Förster Cynipidae occupies 6 drawers in another cabinet and contains many genotype species. There are 6 additional drawers of unworked Förster material, about 17,000 specimens; most of the genotypes have been taken out but many manuscript names occur. Förster founded 64 genera of Cynipidae, 29 on his own species and of these all but one, *Dilyta subclavata*, have been found in the collection. In the regular collection is type material of most of the Hedicke genotype species. At the Deutsch. Ent. Inst. in Dahlem is a collection of about 100 species, 16 of which, including 3 genotypes, are not represented